

DERWENT-ACC-NO: 2001-317714

DERWENT-WEEK: 200348

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TITLE: Laser device comprises a semiconductor laser element emitting a first laser light of a first wavelength, and a surface-emitting semiconductor element excited by the first laser light

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PRIORITY-DATA: 1999JP-0257531 (September 10, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES
MAIN-IPC			
US 6594297 B1	July 15, 2003	N/A	000 H01S
005/00			
DE 10043896 A1	April 26, 2001	N/A	021 H01S
005/04			
JP 2001148536 A	May 29, 2001	N/A	010 H01S
005/065			

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
US 6594297B1	N/A	2000US-0659847	September
11, 2000			
DE 10043896A1	N/A	2000DE-1043896	September 6,
2000			

JP2001148536A  
2000

N/A

2000JP-0258857

August 29,

INT-CL (IPC): H01S003/08, H01S003/091 , H01S005/00 , H01S005/04 ,  
H01S005/065 , H01S005/18 , H01S005/323 , H01S005/40

ABSTRACTED-PUB-NO: DE 10043896A

BASIC-ABSTRACT:

NOVELTY - Laser device comprises a semiconductor laser element emitting a first laser light of a first wavelength; and a surface-emitting semiconductor element which is excited by the first laser light and has a structure for controlling a spatial mode of a second laser light.

DETAILED DESCRIPTION - Preferred Features: The structure has a dimension which is 0.1-10 times as large as the diameter on which the second laser light is spread on one point of the structure. The semiconductor laser element has a first active layer made of a  $\text{In}_{0.2}\text{Ga}_{0.8}\text{As}$  material and a second active layer made of a  $\text{In}_{0.1}\text{Ga}_{0.9}\text{As}$  material (where  $0 < v_1 < v_2 < 1$ ).

USE - As a semiconductor laser device.

ADVANTAGE - High speed modulation of the laser light is achieved.

CHOSEN-DRAWING: Dwg.0/12

TITLE-TERMS: LASER DEVICE COMPRISE SEMICONDUCTOR LASER  
ELEMENT EMIT FIRST LASER

LIGHT FIRST WAVELENGTH SURFACE EMIT SEMICONDUCTOR  
ELEMENT

EXCITATION FIRST LASER LIGHT

DERWENT-CLASS: L03 V08

CPI-CODES: L04-A02D; L04-E03B;

EPI-CODES: V08-A02B; V08-A03B; V08-A04A;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-098110

Non-CPI Secondary Accession Numbers: N2001-228115